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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/891,267	06/27/2001	Shuji Shimizu	SON-2147	1629

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EXAMINER

VIEAUX, GARY

ART UNIT	PAPER NUMBER
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2612

DATE MAILED: 08/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/891,267

Applicant(s)

SHIMIZU, SHUJI

Examiner

Gary C. Vieaux

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which
5 papers have been placed of record in the file.

Specification

The substitute specification , filed June 6, 2003, has been entered and made of
record.
10

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all
obviousness rejections set forth in this Office action:

15 (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20 **Claims 1-3, 5-10, and 12** are rejected under 35 U.S.C. 103(a) as being
unpatentable over McNelley et al. (US #5,550,754) in view of Takahashi et al. (US
#5,621,462) and Fullam (US #5,764,291)

Regarding claim 1, McNelley teaches a camera being mounted on an electronic
apparatus having a display (fig. 12 indicator 100) and the camera being capable of
25 setting a photographing direction to at least the front or rear of a screen of said display
(fig. 12, col. 8 line 64 – col. 9 line 22.) McNelley also teaches photographing direction

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detecting means for, when the photographing direction of the electronic camera is set to face the rear of the screen, outputting a corresponding direction detection signal (col. 9 lines 14-22.) McNelley does not teach controlling an exposure of the electronic camera.

Takahashi teaches a device for controlling an exposure of an electronic camera,

5 said device comprising:

exposure detecting means (fig. 3 indicators 9, 10, and 25, col. 5 lines 12-21) for, on the basis of video signals generated by the electronic camera (col. 4 lines 36-39), generating exposure detection information indicative of the average magnitude of said video signals of a photographed image (col. 4 lines 36-42);

10 exposure adjusting means (fig. 3 indicators 2, 12, 13, 14, and 25) for adjusting the exposure of the electronic camera on the basis of said exposure detection information generated by said exposure detecting means (col. 5 line 65 – col. 6 line 60); and

photographing mode means (fig. 3 indicator 20) for outputting a corresponding
15 mode (col. 5 lines 12-21, col. 9 lines 37-44), wherein

the exposure detecting means logically divides one photographed image (col. 4 lines 45-49) according to first and second patterns (fig. 8 and 7, respectively) and

in the division by said first pattern (fig. 8), divides said photographed image into an upper area and a lower area to generate first exposure detection information

20 relatively strongly reflecting the magnitude of said video signal corresponding to said lower area (col. 8 lines 8-26); and

in the division by said second pattern (fig. 4 and 7), divides the photographed image into a central area and a peripheral area to generate second exposure detection information relatively strongly reflecting the magnitude of the video signal corresponding to said central area (col. 5 lines 22-33, col. 7 line 65 – col. 8 line 7) and,

5 when said photographing mode means outputs said mode corresponding to the first pattern, said exposure adjusting means adjusts the exposure of the electronic camera on the basis of said first exposure detection information (col. 9 lines 37-65), and

 when the photographing mode means outputs a mode corresponding to the second pattern, the exposure adjusting means adjusts the exposure of the electronic
10 camera on the basis of said second exposure detection information (col. 9 lines 37-65.)

 It would have been obvious to one of ordinary skill in the art at the time the invention was made to integrate the device for controlling an exposure of an electronic camera as taught by Takahashi, with the camera being mounted on an electronic apparatus having a display being capable of setting a photographing direction to at least
15 the front or rear of a screen of said display as taught by McNelley. One of ordinary skill in the art at the time the invention was made would be motivated to arrange this combination in order to provide an image pickup device capable of exposure control which can follow the phototaking situation in a natural manner ('462 col. 2 lines 27-31), regardless of orientation (photographing direction) to the front or rear of the screen of
20 the electronic apparatus.

 It is also noted that Takahashi does teach photographing modes, wherein, the modes determine how the exposure adjusting means adjust the exposure of the

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electronic camera on the basis of the resulting exposure detection information (col. 9 lines 37-65.) These modes relate to "center-weighted" (second pattern) for when there is a high probability of the main object being positioned in the central area of the image frame (col. 5 lines 22-33) and "landscape" (first pattern) for when the sky and ground
5 are generally included in the frame at the same time (col. 8 lines 8-26.)

Neither McNelley nor Takahashi teach controlling an exposure of an electronic camera by a device that incorporates the photographing direction detecting means for, when the photographing direction of the electronic camera is set to face the rear of the screen, outputting a corresponding direction detection signal, which, when said
10 photographing direction detecting means outputs said direction detection signal, said exposure adjusting means adjusts the exposure of the electronic camera on the basis of a first exposure detection information, and when the photographing direction detecting means does not output a direction detection signal, the exposure adjusting means adjusts the exposure of the electronic camera on the basis of a second exposure
15 detection information.

Fullam teaches a device for controlling an exposure of an electronic camera, the camera being capable of setting a photographing direction (col. 2 lines 21-23), said device comprising:

photographing direction detecting means (fig. 2B) for, when the photographing
20 direction of the electronic camera is inverted from its normal operating orientation (col. 2 lines 53-63), outputting a corresponding direction detection signal (fig. 6, signal 11; col. 7 lines 9-34),

as well as teaching when said photographing direction detecting means outputs said direction detection signal (fig. 6, signal 11; col. 7 lines 17-19), exposure adjusting means (col. 3 lines 62-67, col. 4 lines 47-62) adjusts the exposure of the electronic camera on the basis of the corresponding exposure detection information (col. 4 lines 47-62), and

when the photographing direction detecting means does not output a direction detection signal (fig. 6, signal 00; col. 7 lines 17-19), the exposure adjusting means (col. 3 lines 62-67, col. 4 lines 47-62) adjusts the exposure of the electronic camera on the basis of corresponding exposure detection information (fig. 6; col. 7 lines 17-19.) The examiner points out the fact that a signal output consisting of zero volts is equivalent to no signal being outputted.

Fullam also teaches dividing a photographic image according a pattern wherein the photographed image is divided into an upper area and a lower area to generate exposure detection information (col. 7 line 35 – col. 8 line 40) relatively strongly reflecting the magnitude of a signal corresponding to said lower area (col. 1 lines 36-62.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the photographing direction detecting means which outputs direction detection signals to adjust the exposure in relation to camera orientation (photographing direction) as taught by Fullam, with the device for controlling an exposure of an electronic camera as taught by McNelley and Takahashi. One of ordinary skill in the art at the time the invention was made would be motivated to make

this combination as a way to automatically adjust the exposure of a camera according to camera orientation (photographing direction.)

Additionally, McNelley teaches using the camera for different photographing situations, videoconferencing and general camera recording use ('754 col. 2 lines 48-53), which requires different camera orientations (photographing directions) ('754 col. 9 lines 2-8) and Takahashi teaches using photographing modes to control an exposure of an electronic camera based on different photographing situations, center-weight and landscape (col. 9 lines 37-65.) Therefore, it would have been further obvious to one of ordinary skill in the art at the time the invention was made to employ direction detection signals which adjust the exposure based on photographing direction as taught by Fullam, to also select different patterns corresponding to those photographing directions for controlling an exposure of an electronic camera as taught by McNelley and Takahashi. One of ordinary skill in the art at the time the invention was made would have been motivated to use different patterns based on orientation (photographing direction) in order to control the exposure of an electronic camera as the orientation (photographing direction) relates to potential camera applications; the first pattern (landscape – facing rear of screen away from operator, and using the display to view image capture) for when the camera is being utilized for general camera image capture use by the operator, e.g. vacations or to transmit a scene which the video-conference user is currently observing, and the second pattern for when the camera is being used for videoconferencing (center-weight – facing front toward the immediate operator, and using display to show person with whom video-conferencing.)

Regarding claim 2, McNelley, Takahashi and Fullam teach all of the limitations of claim 2 (see the 103 rejection to claim 1 supra) including a teaching by Takahashi wherein the exposure detecting means includes: an area-integration circuit (fig. 3 indicator 10) for integrating the corresponding video signals for each area obtained by
5 dividing according to the first and second patterns; and weighting-adding means (fig. 3 indicator 25) for multiplying integration results for the respective areas, which are outputted from said area-integration circuit, by weights for the areas, and adding respective products to set addition results as said first and second exposure detection information areas (col. 7 line 65 – col. 8 line 7.)

10 Regarding claim 3, McNelley, Takahashi and Fullam teach all of the limitations of claim 3 (see the 103 rejection to claim 1 supra) including a teaching by Takahashi wherein the upper area in the division by the first pattern is an upper area about 1/4 that of the photographed image (fig. 8.)

Regarding claim 5, McNelley, Takahashi and Fullam teach all of the limitations of
15 claim 5 (see the 103 rejection to claim 1 supra) including a teaching by Takahashi wherein the electronic camera includes a solid-state image sensing device as an image pickup device (fig. 3 indicator 3, col. 4 lines 19-22.)

Regarding claim 6, McNelley, Takahashi and Fullam teach all of the limitations of claim 6 (see the 103 rejection to claim 5 supra) including a teaching by Takahashi
20 wherein said solid-state image sensing device includes a CCD (fig. 3 indicator 3, col. 4 lines 19-22) or a CMOS sensor.

Regarding claim 7, McNelley, Takahashi and Fullam teach all of the limitations of claim 7 (see the 103 rejection to claim 1 supra) including a teaching by McNelley wherein the electronic camera is a video camera (col. 2 lines 50-53), a teaching by Takahashi wherein the electronic camera is a video camera (col. 4 lines 14-24), and a teaching by Fullam wherein the electronic camera is a video camera (col. 2 lines 21-25) or a digital still camera (col. 2 lines 21-25.)

Regarding claim 8, McNelley, Takahashi and Fullam teach all of the limitations of claim 8 (see the 103 rejection to claim 5 supra) including a teaching by Takahashi wherein the exposure adjusting means (col. 5 line 65 – col. 6 line 60) controls an electronic shutter of the electronic camera to adjust the exposure (col. 1 lines 55-63, col. 5 lines 39-47.)

Regarding claim 9, McNelley, Takahashi and Fullam teach all of the limitations of claim 9 (see the 103 rejection to claim 1 supra) including a teaching by Takahashi of a device further comprising a variable gain amplifier circuit which receives the video signal generated by the electronic camera as an input (fig. 3 indicator 5), and wherein the exposure adjusting means controls a gain of said variable gain amplifier circuit to adjust the exposure (col. 5 lines 39-58.)

Regarding claim 10, McNelley, Takahashi and Fullam teach all of the limitations of claim 10 (see the 103 rejection to claim 1 supra) including a teaching by McNelley wherein the electronic camera (fig. 12 indicator 102) is built into the electronic apparatus (fig. 12.)

Regarding claim 12, McNelley, Takahashi and Fullam teach all of the limitations of claim 12 (see the 103 rejection to claim 1 supra) including a teaching by McNelley wherein the electronic apparatus is a portable information terminal (col. 5 lines 1-7.)

5 **Claims 11 and 13** are rejected under 35 U.S.C. 103(a) as being unpatentable over McNelley, Takahashi and Fullam as applied to claim 1 above, and further in view of Ma (US #5,880,783.)

Regarding claim 11, McNelley, Takahashi and Fullam teach all of the limitations of claim 11 (see the 103 rejection to claim 1 supra) except teaching a device wherein
10 the electronic camera is detachable from the electronic apparatus. Ma teaches an electronic camera that is detachable from the electronic apparatus (fig. 3, col. 2 lines 24-27.) It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the camera unit detachable as taught by Ma, when making the device as taught by McNelley, Takahashi and Fullam. One of ordinary skill in the art
15 at the time the invention was made would be motivated to make the camera unit detachable from the electronic apparatus having a display, so that the camera unit could be interchangeably used on more than one electronic apparatus having a display or so that different camera units could be used on the same electronic apparatus in the event the camera breaks, requiring only replacement of the camera unit.

20 Regarding claim 13, McNelley, Takahashi and Fullam teach all of the limitations of claim 13 (see the 103 rejection to claim 1 supra) except teaching a device wherein the electronic apparatus is a personal computer or a PDA. Ma teaches a camera used

in conjunction with a personal computer (fig. 3, col. 2 lines 24-27), which can be used for video conferencing (col. 1 lines 5-26.) It would have been obvious to one of ordinary skill in the art at the time the invention was made for the electronic apparatus to which the device as taught by McNelley, Takahashi and Fullam is mounted, to be a personal computer as taught by Ma. One of ordinary skill in the art at the time the invention was made would be motivated to have the electronic apparatus be a personal computer so that the user could also have the functionality of a portable computer at their disposal (word processing, games, email, etc.), versus limited functionality if the electronic apparatus were merely for video conferencing and camera use.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over McNelley, Takahashi and Fullam as applied to claim 1 above, and further in view of Yoshimura et al. (US #5,677,733.)

Regarding claim 4, McNelley, Takahashi and Fullam teach all of the limitations of claim 4 (see the 103 rejection to claim 1 supra) including a teaching by Takahashi wherein the central area in the division by the second pattern has a substantially rectangular form ('462, fig. 7), the height thereof is about 1/2 that of the photographed image ('462, fig. 7.) However neither Takahashin, McNelley, nor Fullam, teach a pattern having the width thereof being about 1/3 that of the photographed image.

Regardless, Yoshimura teaches a pattern that has a substantially rectangular form (fig. 6 indicator 101), the height thereof is about 1/2 that of the photographed image (fig. 6), and the width thereof being about 1/3 that of the photographed image (fig. 6.) It would

have been obvious to one of ordinary skill in the art at the time the invention was made to use the center-weighted pattern as taught by Yoshimura, with the device as taught by McNelley, Takahashi and Fullam. One of ordinary skill in the art at the time the invention was made would have been motivated to use the pattern of Yoshimura in
5 order to assign greater weight to the object in the center of the images, by way of a tighter, smaller center, than the pattern originally suggested by Takahashi.

Claim 2 is also rejected under 35 U.S.C. 103(a) as being unpatentable over McNelley, Takahashi and Fullam as applied to claim 1 above, and further in view of Yoshimura et al. (US #5,677,733.)

10 Regarding claim 2, McNelley, Takahashi and Fullam teach all of the limitations of claim 2 (see the 103 rejection to claim 1 supra) including a teaching by Takahashi wherein the exposure detecting means includes: an area-integration circuit (fig. 3 indicator 10) for integrating the corresponding video signals for each area obtained by dividing according to the first and second patterns; and weighting-adding means (fig. 3
15 indicator 25) for multiplying integration results for the respective areas, which are outputted from said area-integration circuit, by weights for the areas, and adding respective products to set addition results as said first and second exposure detection information areas (col. 7 line 65 – col. 8 line 7.) It is further observed that Yoshimura also teaches a device wherein the exposure detecting means includes: an area-
20 integration circuit (fig. 3 indicators 17 and 18) for integrating the corresponding video signals (col. 7 lines 38-42) for each area obtained by dividing according to a pattern (fig. 4a); and weighting-adding means (fig. 3 indicators 19, 20, R1, R2 and R3) for

multiplying integration results for the respective areas, which are outputted from said area-integration circuit, by weights for the areas, and adding respective products to set addition results as exposure detection information (col. 7 line 28 – col. 8 line 32.) It would have been obvious to one of ordinary skill in the art at the time the invention was made for the exposure detecting means to include similar circuitry and inner workings as taught by Yoshimura, with the device as taught by McNelley, Takahashi and Fullam. One of ordinary skill in the art at the time the invention was made would have been motivated to make this particular combination as another way to effect weighted light measuring, and thereby perform automatic exposure control in a camera.

10

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

15 Griencewic (US #5,801,919) discloses a camera built into a personal computer.

Lee et al. (US #6,137,525) discloses a camera built into a PDA.

Takei (US #5,353,058) discloses fixed-area preferential photometry.

Cipolla et al. (US #6,587,151) discloses a camera integrated on a portable computer.

20 Muramatsu et al. (US #5,602,615) discloses a photometric device that divides a subject field into plural regions.

Ma (US #5,880,928) discloses a camera in use with a notebook computer.

Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary C. Vieaux whose telephone number is 703-305-

5 9573. The examiner can normally be reached on Monday - Friday, 8:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on (703) 305-4929. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the
10 Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic
15 Business Center (EBC) at 866-217-9197 (toll-free).

Gary C. Vieaux
Examiner
Art Unit 2612

Gcv2


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PRIMARY EXAMINER